

CLAIMS

1. An apparatus for positioning an element in a borehole, the apparatus comprising an upper positioning means and a lower positioning means for adjusting the plan position of the element at upper and lower levels respectively, wherein the positioning means are joined by means of a connection having an adjustable length.
2. An apparatus as claimed in claim 1, wherein the upper and lower positioning means each comprise a frame that defines an interior space which, when lowered into the borehole, will extend along the longitudinal axis thereof.
3. An apparatus as claimed in claim 2, wherein the upper and lower positioning means are provided with a guide means for adjusting the plan position of an element within the interior space.
4. An apparatus as claimed in claim 3, wherein the guide means comprises a first and a second pair of rollers which are moveable in mutually orthogonal directions across the interior space.
5. An apparatus as claimed in any preceding claim, wherein the connection comprises wire ropes.
6. An apparatus as claimed in any one of claims 1 to 4, wherein the connection comprises chains.
7. An apparatus as claimed in anyone of claims 1 to 4, wherein the connection comprises link arms.

8. An apparatus as claimed in any preceding claim,
wherein the connection comprises a pair of arms
provided on one of the positioning means which are
5 telescopically received in a pair of conduits provided
on the other positioning means.

9. A method of positioning an element in a borehole,
the method comprising the steps of:

10 i) placing into the borehole an apparatus comprising an
upper positioning means and a lower positioning means
for adjusting the plan position of the element at upper
and lower levels respectively, wherein the positioning
means are joined by means of a connection having an
15 adjustable length;

ii) lowering the element into an interior space defined
by the apparatus to a required depth within the
borehole; and

iii) adjusting the upper and lower positioning means to
20 achieve the desired plan position and orientation of
the element.

10. A method as claimed in claim 9, wherein before
placing the apparatus into the borehole, a temporary
25 shaft lining tube is placed within the borehole.

11. A method as claimed in claim 10, wherein the
orientation of the apparatus is fixed relative to the
temporary casing by means of a plurality of locking
30 rams.

AMENDED CLAIMS

**[Received by the International Bureau on 16 August 2004 (16.08.2004);
original claims 1 and 2 replaced by amended claims 1 and 2,
original claims 3-11 unchanged (2 pages)]**

CLAIMS

1. An apparatus for positioning an element in a
borehole, the apparatus comprising an upper positioning
5 means and a lower positioning means for adjusting the
plan position of the element at upper and lower levels
respectively, wherein the positioning means are joined
by means of a connection having an adjustable length,
and wherein the apparatus defines an interior space
10 into which, in use, the element is lowered.

2. An apparatus as claimed in claim 1, wherein the
upper and lower positioning means each comprise a
frame, the frames defining the interior space into
15 which, in use, the element is lowered.

3. An apparatus as claimed in claim 2, wherein the
upper and lower positioning means are provided with a
guide means for adjusting the plan position of an
20 element within the interior space.

4. An apparatus as claimed in claim 3, wherein the
guide means comprises a first and a second pair of
rollers which are moveable in mutually orthogonal
25 directions across the interior space.

5. An apparatus as claimed in any preceding claim,
wherein the connection comprises wire ropes.

30 6. An apparatus as claimed in any one of claims 1 to 4,
wherein the connection comprises chains.

7. An apparatus as claimed in anyone of claims 1 to 4, wherein the connection comprises link arms.

8. An apparatus as claimed in any preceding claim, wherein the connection comprises a pair of arms provided on one of the positioning means which are telescopically received in a pair of conduits provided on the other positioning means.

9. A method of positioning an element in a borehole, the method comprising the steps of:
i) placing into the borehole an apparatus comprising an upper positioning means and a lower positioning means for adjusting the plan position of the element at upper and lower levels respectively, wherein the positioning means are joined by means of a connection having an adjustable length;
ii) lowering the element into an interior space defined by the apparatus to a required depth within the borehole; and
iii) adjusting the upper and lower positioning means to achieve the desired plan position and orientation of the element.

10. A method as claimed in claim 9, wherein before placing the apparatus into the borehole, a temporary shaft lining tube is placed within the borehole.

11. A method as claimed in claim 10, wherein the orientation of the apparatus is fixed relative to the temporary casing by means of a plurality of locking rams.